

Per and Polyfluoroalkyl Substances (PFAS)

What are PFAS?

Per and polyfluoroalkyl substances (together, PFAS) are a class of man-made chemicals used in common product applications such as waterproof and stain proof fabrics, nonstick cookware, some food packaging materials, and fire suppression foams.

How do PFAS Enter Waterways?

PFAS can enter lakes, rivers, or groundwater as part of some industrial releases, wastewater treatment plant discharges, and fire-fighting foam use. Runoff from military bases, domestic airports and biosolids land application sites can also contribute PFAS to waterways.

Are PFAS Regulated?

Currently there are no federally enforceable drinking water limits for PFAS. The EPA set new interim health advisory levels (HALs) on June 15, 2022, for perfluorooctane sulfonate (PFOS) at 0.02 parts per trillion (ppt) and perfluorooctanoic acid (PFOA) at 0.004 ppt. EPA anticipates finalizing these advisories in 2023. These levels are orders of magnitude lower than the previous health advisory level. The previous level, set in 2016, was 70 ppt combined for those two compounds. EPA also set final Health Advisories of 10 ppt for Hexafluoro-propylene Oxide Dimer Acid (HFPO-DA or GenX) and 2000 ppt for Perfluorobutanesulfonic acid (PFBS).

Health advisories are not enforceable like regulations. Instead, the advisories are interim guidance until the EPA develops a formal regulation.

Are PFAS Found in Cary's Drinking Water?

In 2022, Cary tested the drinking water 5 times for the presence of 40 to 58 PFAS compounds. A summary of the detected PFAS compounds is shown in the table below. If not listed, then the PFAS compound was not detected. For a comprehensive report of all laboratory tests, including compounds that were not detected, see Cary's Water Quality Testing Summary online at: carync.gov/testingsummary.

Summary of Detected PFAS in 2022			
	Health Advisory Levels (HALs) (ppt)	Average Detection (ppt)	Range Detected (ppt)
Perfluorobutylsulfonamide (FBSA)	No current HAL	0.37	0.37—0.37
Perfluorobutanesulfonic acid (PFBS)	2000	3.6	3.1—4.3
Perfluorobutanoic acid (PFBA)	No current HAL	9.5	8.2—11
Perfluoroheptanoic acid (PFHpA)	No current HAL	2.2	2—2.5
Perfluorohexanesulfonic (PFHxS)	No current HAL	0.2	ND—0.8
Perfluorohexanoic acid (PFHxA)	No current HAL	7.3	6.3—8.7
Perfluorononanoic acid (PFNA)	No current HAL	ND	ND—0.13
Perfluorooctane sulfonate (PFOS)	0.02*	ND	ND—1
Perfluorooctanoic acid (PFOA)	0.004*	2.4	2.1—2.5
Perfluoropentanoic acid (PFPeA)	No current HAL	9.3	7.5—12
*Health advisory levels (HALs) for PFOA and PFOS are interim — EPA plans to finalize advisories in 2023. The current most advanced PFAS testing methods are not able to accurately measure down to the interim HALs.			

ppt = part per trillion or nanograms per liter

ND = Non detect

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What is Cary doing about PFAS?

- Ongoing testing, monitoring, and reporting of PFAS to the public
- Treatment and removal with powdered activated carbon
- Engineering study of enhanced removal options
- Coordination with federal and state agencies
- Following research efforts within our region and nationally
- Conducting additional study and pilot testing of new technologies, and
- Upgrading Cary's already advanced multi-barrier water treatment process

Because We Often Get Asked...

- GenX (also known as Hexafluoropropylene Oxide Dimer Acid or HFPO-DA) has never been detected in our lake water or drinking water.
- Cary consistently feeds powdered activated carbon, which has been effective at reducing PFAS in the drinking water.
- Studies done by the NC PFAST Network are performed on "Raw" drinking water or source water and not the treated drinking water. The source water for the Town of Cary is Jordan Lake.
- Boiling water does not remove PFAS.
- Bottled water is not required to be tested for PFAS and quality can vary. We recommend that you contact the bottled water manufacturer for information about contaminant levels.
- Installing a home filtration system is a personal choice and may or may not further reduce PFAS found in Cary's water. It is important to know the following:
 - A properly maintained reverse osmosis (RO) "point-of-use" (POU) water filtration system from a reputable manufacturer installed in the kitchen for cooking and drinking is effective for additional PFAS removal.
 - According to the EPA, ["Studies have shown that only a small amount of PFAS can get into your body through your skin. Therefore, showering, bathing, and washing dishes in water containing PFAS are unlikely to significantly increase your risk."](#)
 - Whole house RO systems may double or triple your water bill because the systems uses water to clean itself.
 - For home water testing and filtration information from the North Carolina Department of Health and Human Services, see website: epi.dph.ncdhhs.gov/oe/pfas/PFAS_TestingFiltration.pdf.
- **All filtration systems require regular maintenance (e.g., filter changes) to be effective and can even become a source of increased PFAS levels over time if not properly maintained.**

For More Information

- [PFAS: What You Need to Know \(Environmental Protection Agency\)](#)
- [EPA Fact Sheet](#)
- [2022 Interim updated PFOA and PFOS Health Advisories \(Environmental Protection Agency\)](#)
- [American Water Works Association](#)
- [Center for Disease Control Per- and Polyfluorinated Substances \(PFAS\) Factsheet](#)

Questions?

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